Table of Contents

1. INTRODUCTION. 2

2. WEAPON SYSTEMS RELATIONSHIP TO ITS TRAINING SYSTEM/TRAINING DEVICE. 2

APPENDIX A 2

A BRIEF COMPARISON OF A WEAPONS SYSTEM ACQUISITION PROCESS TO ITS RELATED TRAINING DEVICE SYSTEM ACQUISITION PROCESS 2

3. RELATIVE ORGANIZATIONAL ROLES REGARDING THE WS TRAINING SYSTEM. 4

a. General. 4

b. Acquisition Categories (ACATs). 4

Figure A-2. Acquistion Milestones and Phases 4

Figure A-3. Milestone Documentation Concept 5

c. Program Initiation Sequence and Responsibilities. 6

Figure A-4. Mission Need Statement Flow 6

d. Timing of Program Initiation. 7

4. INVOLVEMENT OF THE NAWCTSD IN THE WSAP. 7

5. TRAINING RESOURCE CONSIDERATIONS DURING THE WSAP. 8

a. Organizational Roles and Responsibilities. 8

6. COMPARISONS OF THE ACQUISITION PROCESSES. 10

a. Relative Timeframe Relationships. 10

b. Difference in WSAP/TDAP Phase-to-Phase Terminology. 10

c. Comparison of Events and Processes in Analogous WSAP-TDAP Phases. 11

d. TD Operational Phase. 14

APPENDIX A

A BRIEF COMPARISON OF A WEAPONS SYSTEM ACQUISITION PROCESS TO ITS RELATED TRAINING DEVICE SYSTEM ACQUISITION PROCESS

1. INTRODUCTION.

This comparison focuses on the general relationship between the Navy's acquisition and pre-acquisition processes for a typical large, complex training device, and the acquisition/pre-acquisition processes of the weapons system to which it relates. A principal objective is to provide enough detail to give readers a general overview of some representative typical events and sequential relationships of each process, but not so much detail that it detracts from the comparison's principal thrust, which is to compare the two processes, their similarities and differences, and their interrelationships. Accordingly, many details of each process have been omitted. The descriptive approach used is to start by showing the general relationship between the weapons systems, the weapons system's training system, and the training device system. This is followed by a brief discussion of the Weapons System Acquisition Process (WSAP), focusing primarily on the WSAP training resource considerations that could lead to identification of a Training Device (TD) requirement. It then addresses the TD Acquisition Process (TDAP) events, phases, and products and relates these to an analogous one of the WSAP. Finally, it mentions a few of the TD operational phase events and processes, since these can be taking place while the early stages of the WS production and deployment phase are occurring.

The training device discussed herein is a Cognizance Symbol 2"0" training device. The designator Cognizance Symbol 2"0" is an inventory management (Cog 2"0") term that identifies the device as one procured by the Naval Air Warfare Center Training Systems Division (NAWCTSD), and for which the NAWCTSD will have inventory management and product support responsibility until it is dropped from the Navy's inventory of equipment. In addition, to fulfill its role as part of the weapon system's training system, it has its own logistics, facilities, personnel, and training material requirements. Therefore, during the TD acquisition and pre-acquisition phases, NAWCTSD must take action to acquire or coordinate acquisition of these support resources as a "Training Service System."

2. WEAPON SYSTEMS RELATIONSHIP TO ITS TRAINING SYSTEM/TRAINING DEVICE.

OPNAVINST 5000.50A, Navy Training Simulator and Device Acquisition and Management, 12 Aug 87, provides the following definitions of "Training System," "Training Device System," and "Training Device/Simulator," and provides policy for training device acquisition and logistic support.

a. Training System. The curriculum materials, classroom aids, training simulators and devices, Technical Training Equipment (TTE), and other equipment used to train active duty and reserve military personnel and selected civilians to operate, maintain, and employ a material system. This includes individual and team training, initial and follow-on training, on-the-job training, proficiency training, and the facilities and logistic support for training simulators, devices and equipment. The training system is described in the applicable Navy Training Plan (NTP).

b. Training Device System. The training device and its supporting logistics, maintenance, instructional development, and facilities. Training devices do not include training targets, which are developed per OPNAVINST 5000.42D.

c. Training Device/Simulator. Hardware and software designed or modified exclusively for training purposes involving, to some degree, simulation or stimulation in its construction or operation, so as to demonstrate or illustrate a concept or simulate an operational circumstance or environment. For the purpose of this comparison, the term training device will include training simulators.

Figure A-1 is a conceptual illustration of how our representative Training Device System relates to the weapon system it supports, based on the OPNAVINST 5000.50A definitions. This background should be useful in correlating the weapons system/training device information provided in this comparison.

The fact that OPNAVINST 5000.50A specifically mentions training devices/simulators separately from TTE and other equipment reflects OPNAV's awareness that training devices are different from other types of equipment used in the Navy's training programs. They can be relatively simple low cost or

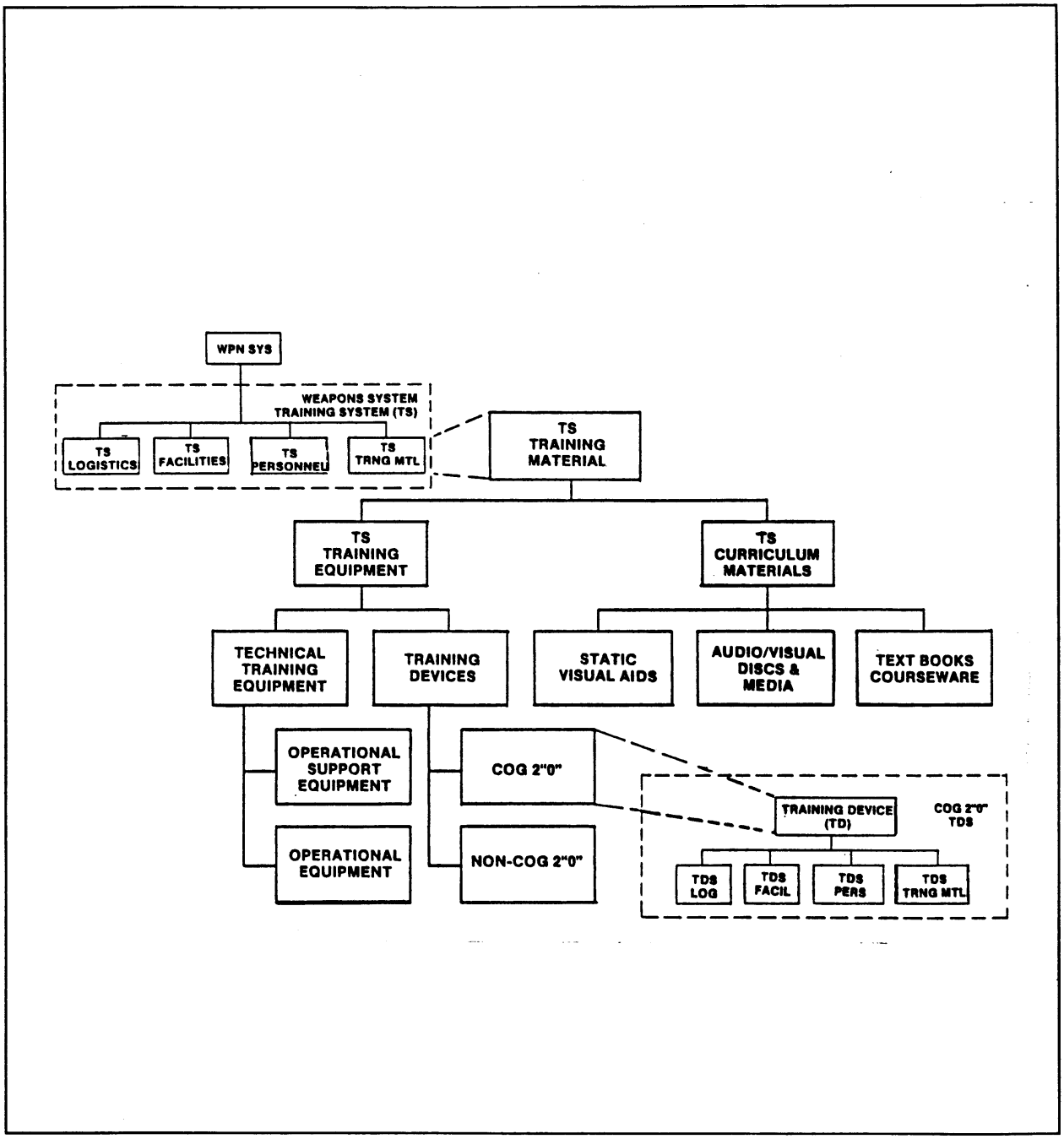

Figure A-1 Weapons System Training System (WSTS) and Cog 2"0" Training Device System (TDS)

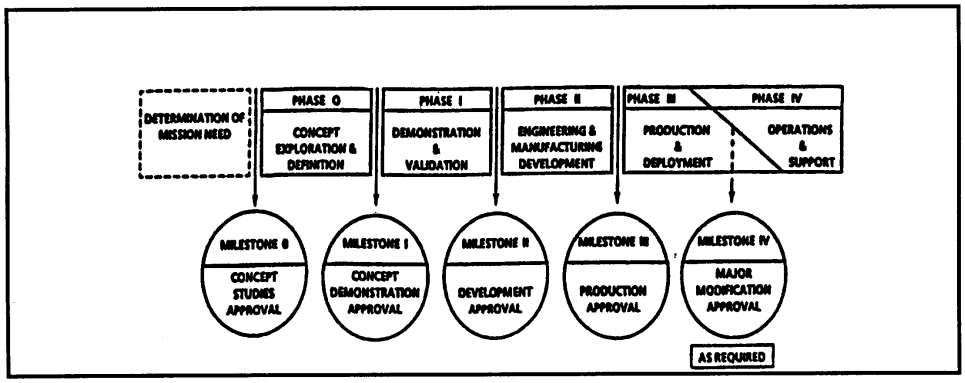

Figure A-2. Acquistion Milestones and Phases

complex expensive items. However, whatever the life-cycle cost of a training device may be, it is generally procured because advance economic and training situation analyses have indicated that it is an investment that will be the least expensive, safest and/or most effective solution to specific training requirements within the overall training requirements to be met by the WS's training system. In general, the lower cost devices are procured for use in basic technical training courses and are not related to any specific major weapons system. The larger, more complex devices most often are procured for training programs related to major weapon systems. In most instances they simulate not only the weapons system, but the warfare environment/tactical situations in which the weapons system will be used.

3. RELATIVE ORGANIZATIONAL ROLES REGARDING THE WS TRAINING SYSTEM.

At this point, readers are reminded of the fact that the TDS is but one sub-element of the WS Training System (WSTS) (refer once again to Figure A-1). The Navy personnel we wish to train with the TDS are the TDS "users." A TD "custodian" is the organization which assumes custody of the TD (picks it up as their plant property account) and annually verifies its possession/need for training to the NAWCTSD. In certain cases, such as an AIRWING, the users/custodians are part of the same organization. In other cases, such as Anti-Submarine Warfare Training Center, Atlantic (ASWTRACEN-LANT) (which is a shore based training facility), ASWTRACENLANT is the TD "custodian," but the ships crews that use ASWTRACENLANT's training system are the TDS "users."

a. General.

The typical Weapons System Acquisition Process (WSAP) has four distinct phases, each initiated by a major decision milestone (see Figure A-2). In this comparison, Milestone 0 is applied to that general point in time that Chief of Naval Operations (CNO) identifies a weapon system (WS) need. It starts the WSAP Concept Exploration period. Accordingly, Milestone 0 is the Program Initiation Milestone. Milestone I is initiated by decisions that approve a WS concept and validate the need for it. It starts the second phase which is known as the Demonstration and Validation Phase. This phase ends with Milestone II, which occurs with a decision to either proceed with full-scale development or terminate the program. If the decision is to proceed, the next phase, known as full-scale development, begins. It ends with Milestone III. Milestone III consists of a decision to proceed into limited or full-scale production. It initiates the last phase, known as Production and Deployment. A weapons system's production phase ends when it is accepted contractually and made available to the user command for operation and support. This point in time is known as the Initial Operational Capability (IOC) point. It is the date by which the system can be manned and operated by an adequately trained, equipped, and supported force.

In other words, once a WS passes through this point, it can be deployed and has reached its operational phase. In some cases, the IOC may be preceded by another event known as the Preliminary Operational Capability (POC) point, which differs from IOC in that a trained, equipped, and supported force may not be fully available when it is first desired to use the weapon.

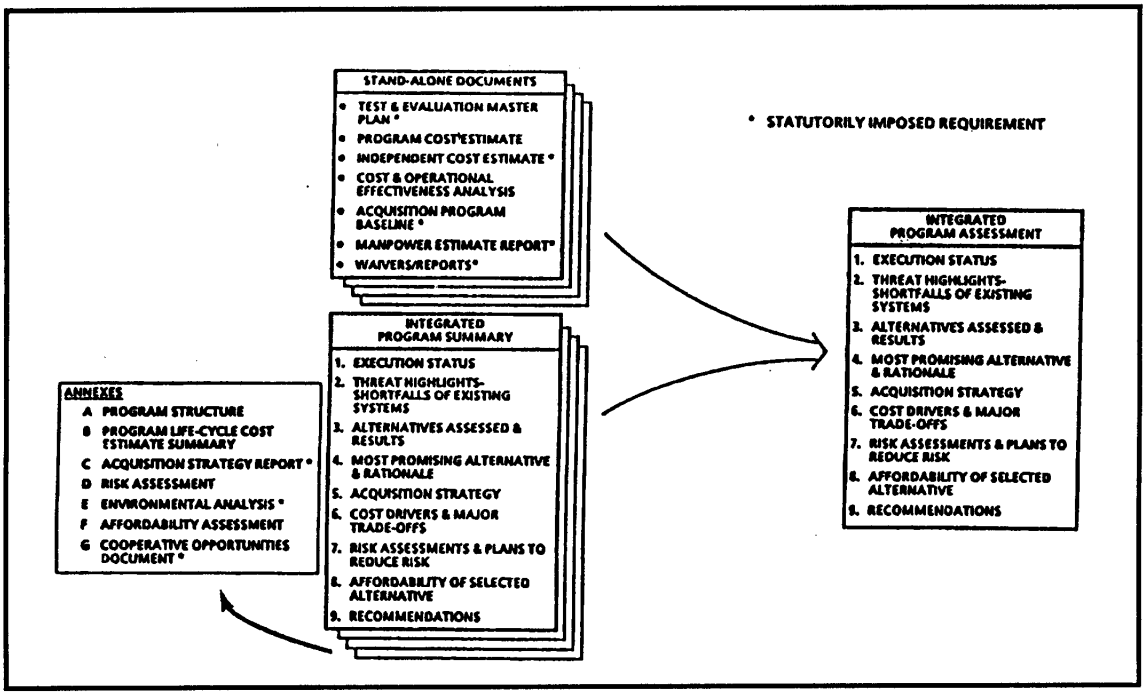

Figure A-3. Milestone Documentation Concept

b. Acquisition Categories (ACATs).

Department of the Navy (DON) programs are classified in ACATs which determine the level of review and decision authority and applicable procedures (see Figure A-3). Management of the process is on a controlled decentralization basis and the major decisions are made by the SECDEF and the SECNAV. This decentralization of research, development, and acquisition management within the Navy is achieved primarily through the assignment of a program/project to an ACAT. The lower the ACAT, the lower the decision making level and the less extensive the documentation requirements. Programs are designed an ACAT when first authorized, but may be redesignated any time thereafter, consistent with the policy of controlled decentralization. Documentation supporting the mission needs determination and milestone decisions will include appropriate ACAT recommendations. The SECDEF is the decision maker for ACAT I and the decision forum is the Defense Systems Acquisition Review Council (DSARC).

ACAT I systems are designated by SECDEF if they meet any of four considerations, one of which is if the cost of the system acquisition is estimated to exceed $200 million in Research, Development, Test, and Evaluation (RDT&E) funds or $1 billion in procurement funds or both.

ACAT II is composed of two sub-categories: ACAT IIS and ACAT IIC. The SECNAV is the decision maker for ACAT IIS programs, and the sponsor Navy Program Decision Meeting (NPDM) is the decision forum. An ACAT IIS program is one that meets certain criteria, such as the total costs are expected to exceed $100 million for RDT&E and/or $500 million procurement.

ACAT IIC programs are those for which the Chief of Naval Operations (CNO) is the decision maker for all major milestones. Selection of programs for this designation is based on a variety of factors, including a funding threshold of $100 million RDT&E or $500 million procurement. The decision forum is the Sponsor NPDM.

ACAT III programs are programs for which one of the Deputy CNOs (DCNOs) or Directors of Major Staff Offices (DMSOs) is the decision maker for major milestones. (In cases where the Program and

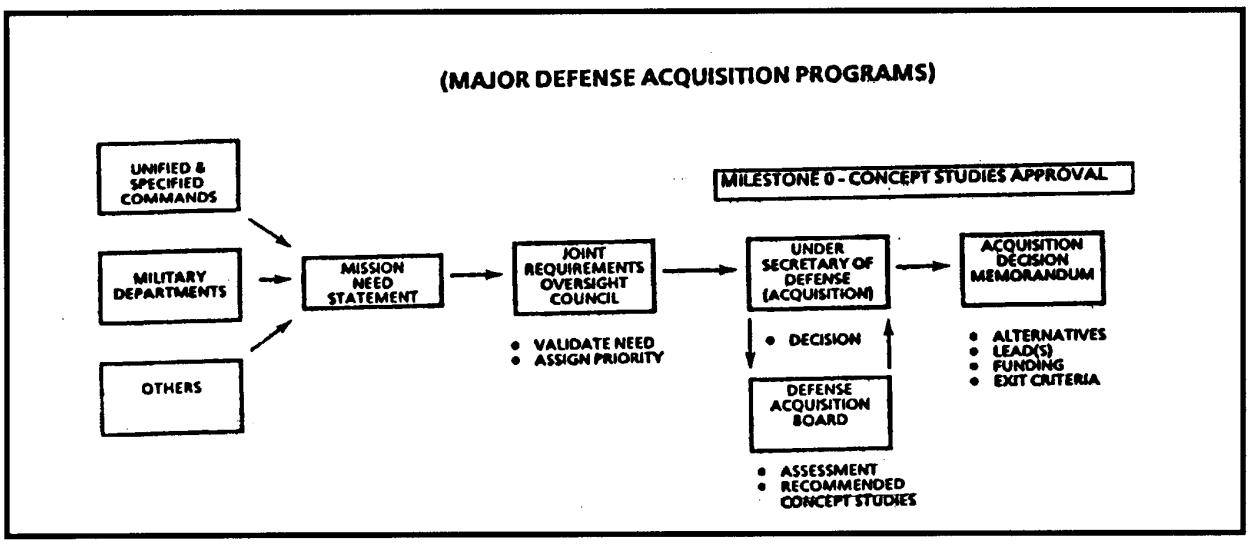

Figure A-4. Mission Need Statement Flow

Resource Sponsors are different, the Program Sponsor is the principal decision authority.) The decision forum is the Sponsor NPDM. Programs are assigned to this category if they affect the military characteristics of ships or aircraft, directly affect the Navy's combat capability, or could be expected to interact with the enemy, but do not exceed the dollar thresholds for ACAT I or II. The OPNAV designates ACAT III programs.

ACAT IV programs are all other acquisition programs. The principal decision maker is the SYSCOM Commander. Within this category, programs are designated IVT if they do not meet the criteria for ACAT III but do require Operational Test and Evaluation. Other ACAT IV programs are designated IVM. Decisions for ACAT IVT and IVM are made by the OPNAV. The decision forum is the NPDM.

In all ACATs, program definition requirements must be met. Program definition means the existence of a satisfactory description of a program's concept, purpose, schedule and resource requirements, and is a mandatory precursor to the allocation of RDT&E,N resources. Program definition is contained in program documentation (OR, NDCP, TEMP, etc.). Programs will not proceed to the next phase of development until the appropriate milestone review has been completed and the program documentation has received final approval by the Program Decision Authority (the person authorized to approve a program proceeding to the next phase of the RDA process).

The program documentation required for each ACAT for each acquisition milestone is shown in Figure A-3. Although the documentation requirements are less for the lower ACAT designations, all programs require the TEMP to ensure that adequate testing is accomplished.

c. Program Initiation Sequence and Responsibilities.

(1) When the need for a new system is perceived and is believed to be affordable, the Office of the Chief of Naval Operations (OPNAV) will initiate CNO action to develop a "Tentative Operational Requirement" (TOR), describing the desired capabilities in general terms. Inputs to TORs may be submitted by OPNAV sponsors by Deputy Chief of Naval Operations/Deputy Major Staff Officers (DCNOs/DMSOs), Fleet Commanders in Chief (CINCs), or others. Draft TORs will be originated by OPNAV sponsors and commented on by Fleet CINCs, VCNO, N095, DCNO, N4, Commander Operational Test and Evaluation Force Commands, and others as appropriate. After adjusting the draft for comments received, the OPNAV sponsor will submit the TOR, which then will be approved by N095 (N3/N5 for strategic nuclear systems) and promulgated by VCNO to the cognizant SYSCOM.

(2) The Systems Commands' Commander, upon receipt of a TOR, will explore the options adequately (interfacing with Navy laboratories, industry, and Commander Operational Test and Evaluation Force Commands as appropriate) to produce a Development Options Paper (DOP) which describes a range of possible systems, covering a spectrum of capabilities to satisfy the TOR. The DOP will outline a complete menu of systems, from those of minimum capability, cost, and time-including upgrades of existing systems to advanced systems of great capability and cost, with much later IOCs. Cost treatment will cover both Research Development Test and Evaluation (RDT&E) cost and unit procurement costs separately.

(3) The OPNAV sponsor selects the alternative which best matches the desired capabilities within affordability considerations, and issues an Operational Requirement (OR) defining the major characteristics of this system. Approval of an OR carries with it the OPNAV Resource Sponsor's commitment to fund the resulting Research, Development and Acquisition (RDA) process, and the assurance that this can be done within projected fiscal resources. It is a prerequisite for funding an RDA program in the first year of the annual Program Objectives Memorandum (POM). For potential major (ACAT I) programs, a Justification for a Major System New Start (JMSNS), will be issued instead of an OR. Preplanned Product Improvement (P31) efforts will normally require an OR, but generally not a TOR or DOP. The SYSCOM will initiate planning for the program described in the OR/JMSNS. High cost or controversial programs will be concurred in by CNO/VCNO prior to approval of the OR (JMSNS). VCNO will decide whether this is accomplished by the CNO Executive Board (CEB)/Acquisition Review Committee (ARC)/Ships Characteristics Improvement Board (SCIB) or directly by N095 (N3/4 for strategic nuclear systems). Figure A-3 provides an overview of the key documents required during each phase of this process. Further information and explanation of the terminology is provided in OPNAVINST 5000.42D and SECNAVINST 5000.2A. Issuance of OR/JMSNS carries the obligation that the necessary RDT&E program will be funded starting the first or second fiscal year (FY) of the next Program Objectives Memorandum (POM). New starts which are not covered by OR/JMSNS will not be included in the first year of the POM.

d. Timing of Program Initiation.

(1) TORs and DOPs may be issued at any time in the annual cycle. A rule of thumb for planning purposes is that the TOR should be issued about a year in advance of the POM submission which will contain initial funding.

(2) An OR/JMSNS may also be issued at any time; however, if a new start is to be included in the POM submission in May, the OR/JMSNS must be promulgated by the preceding first of February. This will allow about two months for OPNAV/SECNAV review of the requirement and the proposed program prior to a final POM decision on funding. Any OR/JMSNS that is not funded in the next POM, as described above, will be canceled.

4. INVOLVEMENT OF THE NAWCTSD IN THE WSAP.

a. The Center's specific role in this regard is described in detail in NAVAIRINST 5451.87A which addresses technical support assignments to Naval Air Systems Command (NAVAIR) field activities and Space and Naval Air Systems Command (NAVAIR) field activities and Space and Naval Warfare Systems Command (SPAWAR) Research and Development (R&D) Centers. This instruction also states that "NAVAIRHQ field activity support for products of other systems commands, such as the Naval Air Warfare Center Training System Division's involvement in Sea warfare trainers, will be addressed by separate instructions."

The beginning and extent of involvement of the NAWCTSD in the Training System/Training Device acquisition process related to a new WS acquisition is determined by the cognizant SYSCOM for the WS. Under current instructions and memoranda of agreement, Naval Air Systems Command, Naval Sea Systems Command, and other platform systems managers can task the NAWCTSD to provide studies, analyses, TDRDs and Navy Training Plan (NTP) support for Manpower Personnel and Training (MPT) decision making. There are some OPNAV policy instructions that do tie the timing of TDRDs and NTPs to the WSAP milestones. These could, therefore, be referenced to see where/how/when the NAWCTSD would logically become involved in a WSAP.

A Training Device Requirements Document (TDRD) is a document which specified the training device requirement and provides the plan which integrates the specific training device hardware/software system being developed and acquired with the training system of which it is an integral part. This document includes all elements of a training device development plan defined in DODINST 1430.13 and will fulfill the requirement for this plan. OPNAVINST 5000.50A policy guidance is that TDRDs will be prepared for training device acquisitions integral to major systems, devices which are major systems by themselves, non-system devices exceeding the stated thresholds, and other acquisition programs as designated by the Chief of Naval Operations (CNO) sponsor, based on the following milestone points:

(1) Prior to Milestone II for training devices integral to a major system acquisition;

(2) By Milestone I (for submission with the System Concept Paper) for training devices which are themselves designated major system acquisitions;

(3) Not later than the Program Objective Memorandum (POM) submission in which budget year funds are requested for manufacture of the prototype or the first device for generic, "non-system" related training devices.

OPNAVINST 1500.8M policy guidance is that the approved NTP is the principal document stating training, billets, personnel, military construction, and training material support requirements to support the introduction and operational use of new developments. It is used as the primary guide for the MPT program and budget submissions. It references OPNAVINST 1500.51D policy guidance that approved NTP resource requirements will be programmed to ensure that Ready for Training (RFT) and Initial Operational Capability (IOC) dates will be met and that MPT requirements are sustained over the system's life cycle. The proposed NTP can be used to initiate programming actions. Finally, it states that CNO will approve the NTP within 30 days after receipt and then provide distribution as required. This approved NTP shall be available by the earlier date of either Milestone II of the WSAP, Operational Evaluation (OP-EVAL), or by the lead time identified below based on the fleet introduction date:

(a) 75 months if military construction is required;

(b) 6 years if major training devices RDT&E is required;

(c) 4 years for major training devices follow on;

(d) 4 years if technical training equipment is required;

(e) 28 months if new billets are required.

The approved NTP will be reviewed annually for necessary update/actions, including the need for a NTP conference (NTPC). The approved NTP will remain in force throughout the life cycle of the WS training program and canceled by CNO (N01) when appropriate. Sometimes a SYSCOM procures the training device itself and subsequently turns it over to the Center for post production support. NAVTRASYSCENINST 4440.12C would apply in such cases, unless the Center had been intimately involved in the acquisition on an "assist" basis. In such cases the SYSCOM is responsible, prior to the turnover of responsibility, that the TDS post production phase initial and annually recurring resources requirements have been adequately provided for.

5. TRAINING RESOURCE CONSIDERATIONS DURING THE WSAP.

a. Organizational Roles and Responsibilities.

As indicated in the preceding paragraph, the identification of required training resources and planning for their acquisition must begin early in the WSAP. Early planning is required because of the long lead times for the planning, programming, budgeting, and acquisition of training resources such as facilities, Technical Training Equipment (TTE), and training device systems. (Basic TTE is unmodified operational

equipment that is used for training in a training activity environment and is not functioning as an integral subsystem of a training device.) If such equipment is used as an integral part of the training device and is identified as such in the device's plant property records, it is also sometimes referred to as "Embedded TTE." A SYSCOM or designated Program Manager (PM-1, JPM-3, PM-23) will be assigned as the Principal Development Activity (PDA) for each WSAP. A PDA is the agency assigned by the cognizant Systems Commander or Deputy Chief of Naval Operations (DCNO)/Director Major Staff Office (DMSO) program sponsor to undertake the management and technical responsibility of the development within the approved WSAP. The SYSCOMs normally assign a Project Manager (PM) and an associated Project Manager Office (PMO), to carry out PDA functions. The PMOs and CNO designated Program Managers are also assigned Training Support Agency (TSA) responsibilities. A Training Support Agent (TSA) is an office, command, or headquarters responsible for supporting the training agent by providing material and other forms of support within the cognizance of the office, command, or headquarters involved (e.g., Systems Commands, Type Commander, Training Commands). SYSCOMs and CNO equipment users/custodians each have some TSA responsibilities, but these are complementary, not duplicator.

In general, the identification of training requirements for a new equipment/subsystem/system, the acquisition and development of their related training system, and providing for the conduct of initial training are the responsibility of the PDA/TSA. The PDA/TSA will establish a Project Team to accomplish these tasks. A SYSCOM Project Team will include an Integrated Logistics Support (ILS) manager who will, in turn, form an ILS Management Team (ILSMT) to address all ILS manager elements of the WSAP including Training and Training Support (T&TS). When the WS training system is in place and approved, the Training Agent (TA) assumes responsibility for follow-on and replacement training for as long as training is required. A training Agent (TA) is an office, command, or headquarters exercising command over and providing support to some major increment of the Department of the Navy's formalized training effort. TA's are: the Commander in Chief, U.S. Pacific Fleet; Commanding General of the Marine Corps; Chief of Naval Education and Training; Chief, Bureau of Medicine and Surgery; Commander, Naval Reserve Force. The TA works closely with the PDA/TSA throughout the WSAP, especially during the development of Navy Training Plans (NTPs), trainer characteristics, and curriculum materials.

The NAWCTSD can be assigned by NAVAIRSYSCOM or NAVSEASYSCOM to be the PDA and/or a TSA for a Training Device System (TDS), and to assist in the WS will form its own Training Device Project Team (TDPT) that performs analogous functions for the TDS acquisition that the SYSCOM does for the WSAP. The TDS requirement will be identified in the WS ILSP under the WS ILSP's required T&TS.

(1) HARDMAN. OPNAVINST 5311.7 requires that manpower and training requirements to support new acquisitions will be determined using the HARDMAN methodology beginning at program initiation and continuing through production and deployment. The Term "HARDMAN" is derived from "Hardware versus Manpower"; analysis weighs hardware capability against manpower requirements. (The need for a training device may be identified in the WS HARDMAN analysis.)

(2) ILS. OPNAVINST 5311.7 requires that acquisition programs will include an ILS program that begins at Program Initiation and continues for the life of the system. The primary objective of the ILS program will be to achieve system readiness objectives at an affordable life cycle cost. Early ILS program activity will focus on designing desirable support characteristics into systems and on determining support requirements. Subsequent activity will focus on acquisition, evaluation, and deployment of support resources. The scope and level of detail (including data requirements) will be tailored to meet specific program needs at each phase of the system's life cycle using Logistic Support Analysis (LSA) techniques. The directive adds that manpower, personnel and training (MPT) are essential elements of ILS and will be given explicit attention early in the acquisition process. Principal activities required will include determining and specifying requirements based on previous experience with similar systems and demographic expectations, conducting design trade offs, and establishing contractor incentives to meet MPT objectives. (The need for a training device may also be identified by the WS LSA process.)

(3) Post Production Support (PPS). DODINST 4000.26 establishes policy for PPS which includes the management and support activities with economical logistic support after cessation of the production phase for the acquisition or modification of a major system or equipment. It requires that PPS be included with ILS planning activities and that an initial PPS plan, documenting resources and management actions required to meet PPS objectives, be completed by the production decision point (Milestone III). If a training device need has been established, the device's continuous PPS resource requirements should be determined through its own LSA process and included as part of the resources identified in the WS NTP.

(4) Equipment Facilities Requirements (EFR). OPNAVINST 11102.1 requires that a Training Equipment Facilities Requirements Plan must be developed five to six years prior to the established Ready-for-Training (RFT) date of the equipment. If the NAWCTSD has been tasked to procure the training device, it will develop EFR plans for the device.

(5) Naval Training Plan (NTP). OPNAVINST 1500.8M requires that training resource requirements be identified in the Navy Training Plan (NTP). In addition to being the principal directive governing NTPs, this instruction is an excellent reference and guide for anyone with training resource acquisition responsibilities. The NTP's original draft is developed by the Training and Training Support (T&TS) Logistics Element Manager (LEM) of the SYSCOM ILS Management Team (ILSMT) for the WS. (The Training Device Requirements, if identified by that time, will be included in the NTP.) If the training device system requirement is identified after the initial NTP, it can be included later in the NTP update process.

6. COMPARISONS OF THE ACQUISITION PROCESSES.

a. Relative Timeframe Relationships.

Figure A-4 provides a side-by-side comparison of some (but not all) of the significant training-related WSAP events and those of its Training Device System. This sample comparison assumes a device requirement exists as a sub-element of the desired WS training system. It also reflects the fact that the Training Device System (TDS) is a stand-alone system and a subsystem of the WSTS, but is not a subsystem of the WS. Therefore, the TDAP is analogous to the WSAP, but is executed in parallel to, and often as a separate action from, the WSAP. In addition, since the NAWCTSD must also provide for/perform all types of Post Production Product Support for the TD (In-Service Engineering/Logistics Support), just as the SYSCOM must provide overall Post Production Product Support for its fielded weapons systems, the NAWCTSD is in essence a microcosm replica of the SYSCOM. It should be remembered that the relative pre-acquisition/acquisition process starting times, phase-by-phase events, and timeframe alignment suggested by Figure A-4 is a generic alignment of analogous phases. To simplify our comparison and facilitate reader understanding of it, we will identify certain TDAP phase changing events as TDAP Milestone O, I, II, III, and NSD that are analogous to the milestones and IOC of the WSAP. A training device (TD) requirement may be identified late in the WS training system planning process, due to program reviews, WS requirements revalidation, and changing situations, so the TD Acquisition Process (TDAP) may begin well after that of the WS and its other training system elements. It may occur during the WSAP's validation or even during the Full-Scale Development Phase. The point in time that a TD need is perceived, and the NAWCTSD is tasked to explore ways to satisfy the need, is equivalent to the TDAP program initiation point. (It is depicted as TD Milestone O in this article.)

The earlier the TD requirement can be identified by the SYSCOM, the NAWCTSD involved, and the TDAP started, the better it will be for the intended device users. (The time needed to properly conceptualize, plan, program, budget, acquire, and field a major TD can vary from 4 to 12 years, depending on device complexity and many other factors. This compares closely to the 9-16 years it takes to go through the same processes for the WS, so there is little room for much delay.) For purposes of our comparison, TDAP Milestone I will be that point in time that a TD concept is selected out of a group of TD concept alternatives submitted to the SYSCOM. The TD Milestone II will be the point that the proposed TD acquisition is approved and a funded task to procure it is received by the Center. The TD Milestone III will be the TD contract award dated. At the time this section was developed, the NAWCTSD had no TDAP management system counterpart to the WSAP ACATs, although one could

conceivably be developed. The sampling of typical events, processes, and products depicted in each phase of Figure A-4 are introduced in the phase they could occur, based on existing instructions. Some of them could occur in one of the adjacent phases instead, depending on the way the particular WSAP/TDAP evolves.

b. Difference in WSAP/TDAP Phase-to-Phase Terminology.

As depicted in Figure A-4, the terms used to describe the phases of a TDAP are slightly different from those used for the WSAP. The TDAP Concept Formulation Phase is analogous to the Concept Exploration Phase of the WSAP. The TDAP Validation Phase equates to the WSAP Demonstration and Validation Phase. The TDAP Contract Definition Phase is analogous to the WSAP's Full-Scale Development Phase and the TDAP Production Phase is analogous to the WSAP's Production Phase. These differences are due to a variety of factors, depending on the WSAP and TDAP situation. For instance, it may be related to the fact, mentioned earlier, that ACAT III and IV programs do not normally have Milestone I. (A TDAP normally does not involve a demonstration of different system alternatives.) Also, the fact that, while the complexities and processes conceptualizing and acquiring a training device are similar in many respects to those of the weapons systems, and both the SYSCOM and the NAWCTSD must comply with many of the same Navy equipment planning, procurement, and life-cycle support instructions, there are some significant differences in orientation/focus/constraints in the processes and in applicability of the instructions.

Figure A-4 also shows the WS and TD Operational Phases because all SYSCOM/NAWCTSD Post Production Support (PPS) must be planned and budgeted available, to support each WS or TD when it is accepted. Navy policy established by OPNAVINST 5000.50A is that training systems shall be in place in sufficient time to train personnel in support of the overall weapons system acquisition IOC. One final point readers should keep in mind is this: Major TDS (the large, complex, high cost ones) are generally brought in very small quantities. Sometimes only one is procured. Sometimes, but rarely, more than five are brought. Within the NAWCTSD, the TDAP is not considered to be over until the last article TD deployment on the initial contract has passed its Navy Support Date (NSD). Thus, where several devices are being procured under the same contract, there are TD deployment activities taking place during the TDAP Production Phase just as is the case of WS deployment during the production phase of a WSAP. However, on initial contracts, in comparison to the duration of the Production and Deployment events of a WSAP, the TDAP production and deployment period generally is shorter, so for WSAP/TDAP comparison simplicity, Figure A-4 depicts the TD Operational Phase as beginning with the Navy Support Date (NSD) of the first articled TD. There is another significant event that may precede the training device's NSD. This is a point in time that is common to acquisition of training systems, known as the Ready for Training (RFT) date. For a TDAP, the RFT date is the point in time in which all elements, including training device, logistics support, maintenance support, training syllabus and lesson plans, and instructors are verified as being available for training, and the performance of the training device conforms to the requirements of the approved military characteristics. The closest WSAP counterpart to a TDAP RFT dated would be the POC date. (NSD is roughly equivalent to the WS Initial Operating Capability (IOC) date.)

c. Comparison of Events and Processes in Analogous WSAP-TDAP Phases.

(1) Concept Exploration (WSAP)/Concept Formulation (TDAP). Alternative WS System Analysis and concept development, cost trade-off studies which lead to preliminary WS alternative design selection, and system cost estimates must include preliminary ILS/MPT estimates. Estimates must be in sufficient detail to support early inclusion of ILS/MPT requirements in the annual POM submitted into the Planning Program and Budgeting System (PPBS). The initial Test and Evaluation Master Plan (TEMPT) is developed. The training concept is developed during this phase using the HARDMAN methodology. Products produced from this will be the MPT Concept Document (MPTCD) and the MPT Resource Requirements Document (MPTRRD). It is during this phase that initial WS Training Situation Analysis (TSA) (which is also referred to as Front End Analysis) and Logistics Support Analysis (LSA) are performed. LSA and HARDMAN analysis provide training and training support requirements data for System Concept Papers (SCPs), WS training system concept, the draft Integrated Logistics Support Plans (ILSPs), the Phase I EFR Plan and other important program

documentation. The possible need of a training device may be identified in this process. Ideally, major WS support hardware/software items which themselves need development, such as training devices/simulators, are identified. If a TD is, and the NAWCTSD is tasked to pursue the matter, the point in time at which this takes place is the Cog 2"0" TDAP Program Initiation Point (TDAP Milestone 0). To facilitate this comparison, we will assume TDAP Milestone 0 does not occur in this phase. The Center will form an initial small-scale Project Team to perform a more detailed analysis of alternate ways of satisfying the training requirement, which it calls a Training System Requirements Analysis (TSRA). This may or may not verify the need for a TD. If it does verify it, the NAWCTSD team will provide a Training Device Alternatives Document (TDAD). The relationship of the TDAD to the TDAP is analogous to that between the DOP and the WSAP. The optimum WS concept(s) and its/their support system(s) has/have been selected and resources programmed/funded for the next phase.

(2) Demonstration and Validation (WSAP) - Validation (TDAP). If competing systems are involved, one is selected. WS and WSTS resource estimates are refined during this phase. Firm ILS MPT plans are developed and resource requirements are identified. This includes facilities design and POAM development. System specifications are developed and a SOW/RFP and contract plan completed for the next phase. A draft NTP is developed by the Training and Training Support (T&TS) LEM of the WS ILS Management Team. The NAWCTSD may be tasked to participate in the draft NTP development. A selection of the training device alternatives offered by the TDAD is made, forming the basis for the TDRD. (An initial assessment of the TD Training Effectiveness Evaluation (TEE) requirement will be addressed in the TDRD.) Generally, a training device will not have its own OR. However, in those instances where a training device itself requires an OR, per OPNAVINST 5000.42D, the TDRD can replace the OR. The NAWCTSD will also develop a Phase I EFR Plan. The resultant TDRD and EFR plan will become part of, or be referenced by, the NTP.

A Training System Functional Description (TSFD will be developed for each approved TDRD. The TSFD describes those physical and operational characteristics of a training device upon which depends its ability to perform desired military functions. Except for basic weapons system or training device identification information, the TSFD document will not duplicate any data in the TDRD. During this phase, the proposed TDS acquisition/POM is submitted, approved and funded, and the Center tasked to proceed with the acquisition.

(3) Full-Scale Development (WSAP) - Contract Definition (TDAP). The first WS Navy Training Plan Conference (NTPC) is held during this phase of the WSAP, to review the draft NTP. (A training device does not normally have its own NTP. In fact, some of the minor operational platforms entering the acquisition process may not require an NTP.) The WS NTP is revised based on feedback received from the training agencies and any appropriate inputs related to the TDAP. It then becomes the proposed NTP transmitted to the CNO sponsor for approval. Additional NTPCs are held as required throughout the WSAP to update the approved NTP to reflect program changes. Updates to the NTP refine the previously approved and promulgated training program, reflect any manpower changes, and define the resources necessary to satisfy the revised training requirements. The JWS ILS Plan is completed, and a Post Production Support (PPS) plan is developed. This will include strategy for continued systems and logistics engineering support from the SYSCOM, normally provided by one or more SYSCOM field activities through designating them as Cognizant Field Activities (CFAs) for Aviation Systems, or In-Service Engineering Activities (ISEAs) for Sea Warfare Systems. Detailed systems and test specification and a SOW/RFP are developed for a production contract.

For the TDAP, a full-scale Training Device Project Team (TDPT) is formed. It begins interacting with a training device Fleet Project Team (FPT) or other appropriate User/TSA Representative Groups such as the Surface Warfare Training Group (SWTG), Submarine Training/Trainer Working Group (STTWG), and Commanding General of the Marine Corps (CGMC) representatives. This interaction continues throughout the TDAP, to ensure a Fleet/TSA review/involvement throughout the process. A Cognizant In-Service Engineering Office (ISEO) for TDS Post Production Support (PPS) is designated. The ISEOs provide support analogous to that provided by the WS CFAs. The TDPT takes action to ensure the training device procurement specification, the Development Test and Evaluation (DT&E) Plan, and the Operational Test and Evaluation (OT&E) Plan are developed. The NAWCTSD must also perform LSA/ILS/PPS and Phase II EFR planning actions for the TDS. These must properly mesh with

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 1 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
REQUIREMENTS DOCUMENTS														
Mission Need Statement	DoDI 5000.2	X				X					Defines broad operational capability need (see 4-8).	Service/Unified and Specified Commands Joint Staff/OSD Staff	Chairman, Joint Requirements Oversight Council	Under Secretary of Defense (Acquisition)
Operational Requirements Document	DoDI 5000.2	X					X	X	X	X	Identifies minimum acceptable performance requirements to satisfy the operational need; also includes performance objectives that would provide operationally meaningful increases in capability (see 4-8).	User or User's representative	Milestone I - ACAT I As designated by the JROC Chairman Milestones II, III & IV ACAT ID As designated by the JROC Chairman ACAT IC Service Chief or as delegated (or DoD Component Head or as delegated if not a Service)	Acqn category ID Under Secretary of Defense (Acquisition) Joint Requirements Oversight Council Acqn category ID & IC Component Acquisition Executive Program Executive Officer Program Manager

the WS training system training resource facility/logistics/acquisition plans that interrelate with those of the TDS. In addition, the Center must develop its own TDS acquisition strategy and procurement package.

The TDPT Project Manager (PM) coordinates the development and implementation of the device Acquisition Management Plan (AMP). The WS NTP training device section(s) serves the PM as a reference/checklist for NAWCTSD training responsibilities during full-scale development. The device EFR plan serves as his/her reference for tracking TD MILCON progress in proper context with facilities plans/status of the WS training systems and in interfacing with the involved external organization responsible to ensure the necessary TDS facilities will be available when they are delivered to the intended training activity. The TDAP ILS Manager completes the ILS Plan actions, ensures contractor development of an Integrated Support Plan (ISP), a Post Production Support Plan (PPSP), and Support Transition Plan (STP). In addition, he/she ensures that all ILS elements have been adequately covered in the specifications. The contract advertising, negotiation, review selection, and award process takes place.

(4) Production (Limited) (WSAP) - Production (TDAP). The contract award date is the TDAP counterpart of WS Milestone III. It starts the production phase of the TDAP. Actions center on ensuring that all contract deliverables are received, inspected/tested and contractually accepted, any deficiencies eliminated, and the facilities and operating environment are satisfactory. The ISEO is heavily involved in "on-site" deliverable transaction, verification, and contractual acceptance assisting the TDPT. The phase ends when the system meets contractual supportability/availability criteria, and finally, the intended Navy User/Equipment Custodian accepts it for training/takes custody of it. As mentioned earlier, an OPNAVINST 5000.50A policy is that the TD be "on-site" and the support resources in place, so the TDS is ready-for-training in time to fulfill its role as part of the WS's training system.

d. TD Operational Phase.

During this phase, the TD user/device custodian is responsible for routine operation, logistics support, and Organizational and Intermediate (O&I) level maintenance. Currently, this is done primarily through Contractor Operation and Maintenance of Simulation (COMS) contracts. The NAWCTSD provides TDS Product Support (In-Service Engineering and Logistics Support) similar to that any SYSCOM provides as part of its continuous PPS responsibilities for its fielded equipment. The NAWCTSD's role in this regard is a microcosm TDS Support equivalent to the SYSCOM's role in supporting the fielded WS and WSTS.

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 2 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
System Threat Assessment Report	DoDI 5000.2	X					X	X	X	X	Documents the Military Department's threat assessment at the system level.	Component Intelligence Command/Agency	Assn category I-MS I Director, Defense Intelligence Agency Assn category I D-MS II and MS III and IV Director, Defense Intelligence Agency Assn category I C-MS II and MS III and IV Director, Component Intelligence Command/ Agency	Assn category I D Under Secretary of Defense (Acquisition) Assn category I C Milestone Decision Authority Assn category I D & I C Service Chief or as designated Component Acquisition Executive Program Executive Officer Program Manager
Defense Intelligence Agency Intelligence Report	DoDI 5000.2	X				X	X	X	X	X	Validates the basis for the threat in the Mission Need Statement and System Threat Assessment Report. (Not required for acquisition category I C programs for Milestones II/III/IV)	Defense Intelligence Agency	Director, Defense Intelligence Agency	Under Secretary of Defense (Acquisition) Joint Requirements Oversight Council Component Acquisition Executive Program Executive Officer Program Manager
Joint Requirements Oversight Council Assessment.	Secretary of Defense "Defense Management Report to the President", July 1989	X					X	X	X	X	Verifies the need and confirms that the proposed performance objectives and thresholds to be contained in the program baseline satisfy the operational need. (Not required for acquisition category I C programs for Milestones II/III/IV)	Joint Requirements Oversight Council	Vice Chairman, Joint Chiefs of Staff	Under Secretary of Defense (Acquisition)

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 3 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
ACQUISITION	DOCUMENTS/ WAIVERS													
Integrated Program Summary	DoDI 5000.2	X					X	X	X	X	Highlights status of critical areas and plans for future acquisition. Replaces the System Concept Paper and the Decision Coordinating Paper. •Annex A - Program Structure. •Annex B - Program Life Cycle Cost Estimate Summary. •Annex C - Acquisition Strategy Report (10 U.S.C. §2438). •Annex D - Risk Assessment. •Annex E - Environmental Analysis (42 U.S.C. §4321-4347) •Annex F - Affordability Assessment. •Annex G - Cooperative Opportunities Document (10 U.S.C. §2350a(e)).	Program Executive Officer or Designated Component Official with support from the Program Manager	Acqn category ID Component Acquisition Executive Acqn category IC Designated Component Official	Acqn category ID Under Secretary of Defense (Acquisition) Acqn category IC Milestone Decision Authority

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 4 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	A	I	II	III	IV				
Integrated Program Assessment	DoDI 5000.2	X					X	X	X	X	Summarizes the independent assessment of the program. Identifies critical areas, issues and recommendations for the milestone decision authority. (Uses the same format as the Integrated Program Summary) (Affordability assessment at OSD level is performed by ASD (PA&E))	Acqn category ID Defense Acquisition Board Committee Acqn category IC As determined by the Component Acquisition Executive	Acqn category ID Defense Acquisition Board Committee Chairman Acqn category IC As determined by the Component Acquisition Executive	Acqn category ID Under Secretary of Defense (Acquisition) Acqn category IC Milestone Decision Authority Program Executive Officer Program Manager
Program Life Cycle Cost Estimate	DoDI 5000.2	X					X	X	X	X	Documents the Program Manager's or Designated Component Official's life cycle cost estimate of the program. Used by the milestone decision authority along with the independent cost estimate to determine the acquisition program baseline cost estimate and affordability of the program.	Program Manager or Designated Component Official	Acqn category ID Component Acquisition Executive Acqn category IC Program Executive Officer	Acqn category ID Under Secretary of Defense (Acquisition) Acqn category ID & IC Milestone Decision Authority Cost Analysis Improvement Group Director, Independent Cost Activity

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 5 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
Acquisition Program Baseline Agreement	DoDI 5000.2 10 U.S.C. §2435 (For Milestones II and III)	X					X	X	X	X	Document the cost, schedule, and performance baseline agreement between the milestone decision authority and Program Manager or Designated Component Official.	Program Manager or Designated Component Official	Acqn category ID Under Secretary of Defense (Acquisition) Acqn category IC Milestone Decision Authority	Acqn category ID & IC Service Chief or as designated Component Acquisition Executive Program Executive Officer Program Manager Acqn category IC Under Secretary of Defense (Acquisition) (information only)
Manpower Estimate Report	10 U.S.C. §2434	X						X •	X •		Notifies Congress of manpower estimate. (*30 days prior to approval to enter Phase II and Phase III)	Service Manpower Sponsor	Acqn category ID Under Secretary of Defense (Acquisition) Acqn category IC Milestone Decision Authority	Acqn category ID & IC Congress Acqn category IC ASD(FMEP) (information only)

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 6 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
Test and Evaluation Master Plan	DoDI 5000.2 10 U.S.C. §2399(b)(1) (Prior to start of operational testing)	X					X	X	X	X	Lists the critical Developmental Test and Operational Test objectives and outlines the testing and evaluation approach and methodology.	Program Manager or Designated Component Official	Acqn category ID & IC Component Approval Component Acquisition Executive OSD Approval DoD Director, Operational Test and Evaluation Deputy Director Defense Research and Engineering (Test and Evaluation)	Acqn category ID Under Secretary of Defense (Acquisition) Acqn category IC Milestone Decision Authority Acqn category ID & IC Service Chief or as designated Congress (For naval vessels and satellites only - submitted with the Low-Rate Initial Production Report (below))

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 7 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY								PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE							
		I	II	III	IV	0	I	II	III	IV			
Low-Rate Initial Production Report for Naval Vessels and Satellites	10 U.S.C. §2400(c)	X						X			Provides Congress: • an explanation of the rate and quantity prescribed for low-rate initial production and the considerations in establishing that rate and quantity, • a Test and Evaluation Master Plan, and • an acquisition strategy which has been approved by the milestone decision authority and which includes the procurement objectives in terms of total quantity of articles to be procured and annual production rates. Note: The low-rate initial production rate and quantity explanation may be included in the Acquisition Strategy Report of Annex C to the Integrated Program Summary.	Program Manager	Milestone Decision Authority	Congress

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 8 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY								PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE							
		I	II	III	IV	0	I	II	III	IV				
Live Fire Test and Evaluation Waiver	10 U.S.C. §2366(c)	X						X *			Certifies to Congress(* prior to entering Phase II): ○when live fire survivability testing of a covered major system (or covered product improvement program thereto) or lethality testing of a major munitions or a missile program (or covered product improvement program thereto) would be unreasonably expensive and impractical. ○certification must include a report on plans to evaluate survivability or lethality and assess possible alternatives to realistic survivability testing.	Program Manager	Under Secretary of Defense (Acquisition)	Congress
Competitive Prototype Strategy Waiver	10 U.S.C. §2365(c)	X					X				Documents when it is not practicable to develop competitive prototypes at the system or subsystem level during the Demonstration & Validation phase. (Expires 30 September 1991)	Designated Component Official	Milestone Decision Authority	Congress

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 9 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY: ACQUISITION CATEGORY I	II	III	IV	MILESTONE 0	I	II	III	IV	PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
Developmental Test & Evaluation Report	DoDI 5000.2	X						X	X		Provides the results of developmental test and evaluation. (Includes Live Fire test results/report as required)	Component Developmental Test and Evaluation Activity	Commander, Developmental Test and Evaluation Activity	Component Head Service Chief or as designated Milestone Decision Authority DoD Director, Operational Test and Evaluation Deputy Director, Defense Research & Engineering (Test & Evaluation) Component Acquisition Executive Program Executive Officer Program Manager
INDEPENDENT	DOCUMENTS													
Independent Cost Estimate	DoDI 5000.2 10 U.S.C. §2434 (for Milestones II and III)	X					X	X	X	X	Documents the Component's Independent Life-Cycle Cost Estimate.	Independent Cost Activity	Director, Independent Cost Activity	Acqn category ID & IC Milestone Decision Authority Cost Analysis Improvement Group Service Chief or as designated Component Acquisition Executive Program Executive Officer Program Manager

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 10 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
Independent Cost Estimate Report (Acquisition category ID & IC)	DoDI 5000.2 10 U.S.C. §2434 (for Milestones II and III)	X					X	X	X	X	Assesses the Component's independent Life-Cycle Cost Estimate and provides an independent (of the Component) cost estimate.	Cost Analysis Improvement Group, Office of the Assistant Secretary of Defense (Program Analysis & Evaluation)	Chairman, Cost Analysis Improvement Group	Under Secretary of Defense (Acquisition) Service Chief or as designated Component Acquisition Executive Program Executive Officer Program Manager
Cost and Operational Effectiveness Analysis	DoDI 5000.2	X					X	X	X	X	Analyzes the comparative cost-effectiveness of alternatives at Milestones I and II. At Milestones III and IV, the analysis is an update of previous analysis as required.	Independent Analysis Activity (as determined by DoD Component Head, or as delegated)	Acqn category ID & IC As determined by DoD Component Head, or as delegated	Acqn category ID Under Secretary of Defense (Acquisition) Assistant Secretary of Defense (Program Analysis & Evaluation) Acqn category ID & IC Milestone Decision Authority Component Acquisition Executive Program Executive Officer Program Manager

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 11 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
Early Operational Assessment Report	DoDI 5000.2	X						X *			*When required to support a Low-Rate Initial Production decision, with exit criteria, at Milestone III.	Component Operational Test and Evaluation Activity	Commander, Operational Test and Evaluation Activity	Component Head Service Chief or as designated Milestone Decision Authority OoD Director, Operational Test and Evaluation Deputy Director, Defense Research & Engineering (Test & Evaluation) Component Acquisition Executive Program Executive Officer Program Manager

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 12 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
Operational Test & Evaluation Report	10 U.S.C. 138(e)(1)	X							X		Provides the results of initial operational test and evaluation.	Component Operational Test and Evaluation Activity	Commander, Operational Test and Evaluation Activity	Component Head Service Chief or as designated Milestone Decision Authority OoD Director, Operational Test and Evaluation Deputy Director, Defense Research & Engineering (Test & Evaluation) Component Acquisition Executive Program Executive Officer Program Manager
Live Fire Test and Evaluation Report	10 U.S.C. §2366(d)	X							X		Provides an independent OSD report to Congress that: •a covered major system (or covered product improvement program thereto) has completed realistic survivability testing; •a major munitions or a missile program (or covered product improvement program thereto) has completed realistic lethality testing; •describes the results of survivability or lethality testing and gives an overall assessment of the testing.	Deputy Director, Defense Research & Engineering (Test & Evaluation)	Under Secretary of Defense (Acquisition)	Congress

Table A-1. ACQUISITION CATEGORY I MILESTONE DOCUMENTATION REQUIREMENTS (Part 13 of 13)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
Beyond Low-Rate Initial Production Report	10 U.S.C. §2399(b)(2)(B)(i)(4)	X							X		Notifies Congress of DoD Director, Operational Test & Evaluation's assessment of: adequacy of initial operational test and evaluation, and whether the test results confirm the items or components are effective and suitable for combat prior to the milestone decision authority's decision to proceed beyond low-rate initial production, i.e. approval for full-rate production.	DoD Director, Operational Test & Evaluation	DoD Director, Operational Test & Evaluation	Congress Secretary of Defense Component Head Under Secretary of Defense (Acquisition) Component Acquisition Executive Program Executive Officer Program Manager
DECISION MEMORANDUM Acquisition Decision Memorandum	DoDI 5000.2	X				X	X	X	X	X	Provides the decisions of the milestone decision authority (including approval of the Acquisition Strategy Report if not approved prior to the milestone) and the exit criteria for the next phase of the program.	Acqn category ID Defense Acquisition Board Executive Secretary Acqn category IC Component Acquisition Executive's Staff Executive Secretary	Acqn category ID Under Secretary of Defense (Acquisition) Acqn category IC Milestone Decision Authority	Component Head Service Chief or as designated Component Acquisition Executive Program Executive Officer Program Manager

Table A 2. **ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS** (Part 1 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY: ACQUISITION CATEGORY II	III	IV	APPLICABILITY: MILESTONE 0	I	II	III	IV	PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
REQUIREMENTS DOCUMENTS													
Mission Need Statement	DoDI 5000.2	X	X	X	X					Defines broad operational capability need (see Section 4.B).	Service Commands and Staffs; Component Commands; Joint Staff	Service Chief or as delegated (or DoD Component Head or as delegated if not a Service)	Component Acquisition Executive; Joint Requirements Oversight Council (information only)
Operational Requirements Document	DoDI 5000.2	X	X	X		X	X	X	X	Identifies minimum acceptable performance requirements to satisfy the operational need; also includes performance objectives that would provide operationally meaningful increases in capability (see Section 4.B).	User or User's representative	Service Chief or as delegated (or DoD Component Head or as delegated if not a Service)	Milestone decision authority; Program Manager
System Threat Assessment	DoDI 5000.2	X	X	X		X	X	X	X	Documents the Military Department's threat assessment at the system level.	Component Intelligence Command/Agency	Director, Component Intelligence Command/ Agency	Milestone Decision Authority; Program Manager
Intelligence Report	DoDI 5000.2	X	X		X	X	X	X	X	Validates the basis for the threat in the Mission Need Statement and system threat assessment.	Component Intelligence Command/Agency	Director, Component Intelligence Command/ Agency	Milestone Decision Authority; Program Manager

Table A-2. ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS (Part 2 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
ACQUISITION	DOCUMENTS/ WAIVERS													
Integrated Program Summary	DoDI 5000.2		X	X	X		X	X	X	X	•Highlights status of critical areas and plans for future acquisition. •Annex A - Program Structure. •Annex B - Program Life Cycle Cost Estimate Summary. •Annex C - Acquisition Strategy Report. •Annex D - Risk Assessment. •Annex E - Environmental Analysis (42 U.S.C. §4321-4347) •Annex F - Affordability Assessment.	Acqn category II Program Executive Officer or Designated Component Official with support from the Program Manager Acqn category III & IV Program Manager or Designated Component Official	Designated Component Official	Milestone Decision Authority
Integrated Program Assessment	DoDI 5000.2		X	X	X		X	X	X	X	Summarizes the assessment of the program, identifies critical areas, issues and recommendations for the milestone decision authority. (Uses the same format as the Integrated Program Summary)	Appropriate staff, committee or council	As determined by the Component Acquisition Executive	Milestone Decision Authority

Table A-2. ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS (Part 3 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY								PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE							
		I	II	III	IV	0	I	II	III	IV			
Program Life Cycle Cost Estimate	DoDI 5000.2		X	X	X		X	X	X	X	Documents the Program Manager's or Designated Component Official's life cycle cost estimate of the program. Used by the milestone decision authority, along with the independent cost estimate (for acquisition category II programs), to determine the acquisition program baseline cost estimate and affordability of the program.	Program Manager or Designated Component Official	Acqn category II Program Executive Officer Acqn category III & IV Designated Component Official	Acqn category II Milestone Decision Authority Director, Independent Cost Activity Acqn category III & IV Milestone Decision Authority
Acquisition Program Baseline Agreement	DoDI 5000.2		X	X	X		X	X	X	X	Documents the cost, schedule and performance baseline agreement between the milestone decision authority and Program Manager or Designated Component Official.	Program Manager or Designated Component Official	Milestone Decision Authority	Service Chief or as designated Program Manager
Test and Evaluation Master Plan	DoDI 5000.2		X	X	X		X	X	X	X	Lists the critical Developmental Test and Operational Test objectives and outlines the testing and evaluation approach and methodology.	Program Manager or Designated Component Official	Component Approval Milestone Decision Authority OSD Approval (if OSD T&E Oversight) DoD Director, Operational Test and Evaluation Deputy Director Defense Research and Engineering (Test and Evaluation)	Service Chief or as designated Component DT&E and OT&E activities

Table A-2 ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS (Part 4 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY								PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE							
		I	II	III	IV	0	I	II	III	IV				
Live Fire Test and Evaluation Waiver	10 U.S.C. §2366		X	X **	X **			X *			Certifies to Congress (*prior to entering Phase II): •when live fire survivability testing of a covered major system (or covered product improvement thereto) or lethality testing of a major munitions or a missile program (or covered product improvement thereto) would be unreasonably expensive and impractical. •certification must include a report on plans to evaluate survivability or lethality and assess possible alternatives to realistic survivability testing. **An ACAT III or IV "covered product improvement program" which is likely to affect significantly the survivability of a covered major system or which is likely to affect significantly the lethality of the munition or missile produced under a major munitions program or a missile program.	Program Manager	Director, Defense Research & Engineering	Congress

Table A-2. ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS (Part 5 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY								PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE							
		I	II	III	IV	0	I	II	III	IV			
Developmental Test & Evaluation Report	DoDI 5000.2		X	X	X			X	X		Provides the results of developmental test and evaluation. (Includes Live Fire test results/report as required)	Component Developmental Test and Evaluation Activity	Commander, Developmental Test and Evaluation Activity	Service Chief or as designated Milestone Decision Authority Program Manager [illegible] DoD Director, Operational Test and Evaluation Deputy Director, Defense Research & Engineering (Test & Evaluation)
INDEPENDENT DOCUMENTS													
Independent Cost Estimate	DoDI 5000.2		X				X	X	X	X	Documents the Component's Independent Life-Cycle Cost Estimate.	Independent Cost Activity	Director, Independent Cost Activity	Service Chief or as designated Milestone Decision Authority Program Executive Officer Program Manager
Cost and Operational Effectiveness Analysis	DoDI 5000.2		X	X	X		X	X	X	X	Analyzes the comparative cost-effectiveness of alternatives at Milestones I and II. The Milestone III and IV analysis is an update of previous analysis, if required.	Independent Analysis Activity (as determined by DoD Component head, or as delegated)	As determined by DoD Component Head, or as delegated	Milestone Decision Authority

Table A-2. ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS (Part 6 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY								PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE							
		I	II	III	IV	0	I	II	III	IV			
Early Operational Assessment Report	DoDI 5000.2		X	X	X			X *			*When required to support a Low-Rate Initial Production decision, with exit criteria, at Milestone II.	Component Operational Test and Evaluation Activity	Commander, Operational Test and Evaluation Activity	Service Chief or as designated Milestone Decision Authority Program Manager If OSD T&E oversight DoD Director, Operational Test and Evaluation Deputy Director, Defense Research & Engineering (Test & Evaluation)
Operational Test & Evaluation Report	10 U.S.C. §138(e)(1)		X	X	X				X		Provides the results of initial operational test and evaluation.	Component Operational Test and Evaluation Activity	Commander, Operational Test and Evaluation Activity	Service Chief or as designated Milestone Decision Authority Program Manager If OSD T&E oversight DoD Director, Operational Test and Evaluation Deputy Director, Defense Research & Engineering (Test & Evaluation)

Table A-2. ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS (Part 7 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY									PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE								
		I	II	III	IV	0	I	II	III	IV				
Live Fire Test and Evaluation Report	10 U.S.C. §2366		X	X *	X *				X		Provides an independent OSD report to Congress that: •a covered major system (or covered product improvement thereto) has completed realistic survivability testing; •a major munitions or a missile program (or covered product improvement thereto) has completed realistic lethality testing; •describes the results of survivability or lethality testing and gives an overall assessment of the testing. * An ACAT III or IV "covered product improvement program" which is likely to affect significantly the survivability of a covered major system or which is likely to affect significantly the lethality of the munition or missile produced under a major munitions program or a missile program.	Deputy Director, Defense Research & Engineering (Test & Evaluation)	Director, Defense Research & Engineering	Congress

Table A-2. ACQUISITION CATEGORY II, III AND IV MILESTONE DOCUMENTATION REQUIREMENTS (Part 8 of 8)

DOCUMENT TITLE	SOURCE OF REQUIREMENT	APPLICABILITY								PURPOSE OF DOCUMENT	PREPARED BY	APPROVED BY OR VALIDATED BY	SUBMITTED TO
		ACQUISITION CATEGORY				MILESTONE							
		I	II	III	IV	0	I	II	III	IV			
Beyond Low-Rate Initial Production Report	10 U.S.C. §138(a)(2)(B) 10 U.S.C. §2399(b)(2)(3)(4)		X *	X *	X *				X		DoD Director, Operational Test & Evaluation's assessment of: •adequacy of initial operational test and evaluation, and •whether the test results confirm the items or components are effective and suitable for combat prior to the milestone decision authority's decision to proceed beyond low-rate initial production, i.e. approval for full-rate production. *For those programs designated by DoD Director, Operational Test & Evaluation (DOT&E) for DOT&E oversight	DoD Director, Operational Test and Evaluation	DoD Director, Operational Test and Evaluation	Congress Secretary of Defense Component Head Under Secretary of Defense (Acquisition) Component Acquisition Executive Program Executive Officer Milestone Decision Authority Program Manager
DECISION MEMORANDUM													
Acquisition Decision Memorandum	DoDI 5000.2		X	X	X	X	X	X	X	X	Provides the decisions of the milestone decision authority (including approval of the Acquisition Strategy Report if not approved prior to the milestone) and the exit criteria for the next phase of the program.	Milestone Decision Authority staff	Milestone Decision Authority	Service Chief or as designated Component Acquisition Executive Program Manager